

### ABSTRACT

Apparatus and Methods for the self-alignment of separated regions in a lateral MOSFET of an integrate circuit. In one embodiment, a method comprising, forming a relatively thin dielectric layer on a surface of a substrate. Forming a first region of relatively thick material having a predetermined lateral length on the surface of the substrate adjacent the relatively thin dielectric layer. Implanting dopants to form a top gate using a first edge of the first region as a mask to define a first edge of the top gate. Implanting dopants to form a drain contact using a second edge of the first region as a mask to define a first edge of the drain contact, wherein the distance between the top gate and drain contact is defined by the lateral length of the first region.

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